

CLAIMS

What is claimed:

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1 A method for a single hardware platform to support multiple
2 network traffic types, comprising:
3 detecting a request to establish a network connection to the hardware
4 platform;
5 determining network traffic type used by the network connection; and
6 executing code to selectively enable connection components to process
7 data over the network connection, according to the network traffic type.

1 2. The method of claim 1 further comprising invoking an appropriate
2 one of a plurality of software images corresponding to the network traffic
3 type.

1 3. The method of claim 2 further comprising copying the appropriate
2 one of a plurality of software images into a local memory on the single
3 platform.

1 4. The method of claim 2 wherein one of the plurality of network
2 traffic type being voice data.

1 5. The method of claim 2 wherein one of the plurality of network
2 traffic type being Asynchronous Transfer Mode (ATM).

1 6. The method of claim 2 wherein one of the plurality of network
2 traffic type being Frame Relay.

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1 7. An apparatus for a multi-service network architecture for
2 processing network traffic arriving on a network connection comprising:
3 a plurality of network connection components residing on a single
4 platform; and
5 a processor coupled to the plurality of network connection components
6 and configured to execute a predetermined one of a plurality of software
7 images corresponding to the type of network traffic arriving on the network
8 connection and to selectively enable at least one of the plurality of network
9 connection components according to the predetermined one of a plurality of
10 software images.

1 8. The apparatus of claim 7 further comprising a local memory
2 coupled to the processor and configured to hold the predetermined one of a
3 plurality of software images.

1 9. The apparatus of claim 8 wherein at least one the plurality of
2 network connection components is a Time Division Multiplexed (TDM)
3 switch configured to provide full-duplex serial paths.

1 10. The apparatus of claim 9 wherein the plurality of network
2 connection components comprises a plurality of T1/E1 framers coupled to a
3 first set of plurality of ports on the TDM switch.

1 11. The apparatus of claim 10 further comprising a plurality of
2 digital signal processing modules coupled to a second set of a plurality of ports
3 on the TDM switch.

1 12. The apparatus of claim 10 further comprising a plurality of serial
2 communication controllers coupled to a third set of a plurality of ports on the
3 ~~TDM switch.~~

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1 13. The apparatus of claim 11 further comprising a connection
2 management software coupled to the local memory and configured to
3 identify the type of connection set-up being requested and to invoke a
4 corresponding one of a plurality of software images which programs the TDM
5 switch to correctly manage desired connectivity.

1 14. A system for a multi-service network architecture for processing
2 network traffic arriving on a network connection comprising:
3 a plurality of network connection components residing on a single
4 platform; and
5 a processor coupled to the plurality of network connection components
6 and configured to execute a predetermined one of a plurality of software
7 images corresponding to the type of network traffic arriving on the network
8 connection and to selectively enable at least one of the plurality of network
9 connection components according to the predetermined one of a plurality of
10 software images.

1 15. The system of claim 14 further comprising a local memory
2 coupled to the processor and configured to hold the predetermined one of a
3 plurality of software images.

1 16. The system of claim 15 wherein at least one the plurality of
2 network connection components is a Time Division Multiplexed (TDM)
3 switch configured to provide full-duplex serial paths.

1 17. The system of claim 16 wherein the plurality of network
2 connection components comprises a plurality of T1/E1 framers coupled a first
3 set of plurality of ports on the TDM switch.

1 18. The system of claim 17 further comprising a plurality of digital
2 signal processing modules coupled to a second set of a plurality of ports on
3 the TDM switch.

1 19. The system of claim 18 further comprising a plurality of serial
2 communication controllers coupled to a third set of a plurality of ports on the
3 TDM switch.

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1 20. The system of claim 19 further comprising a connection
2 management software coupled to the local memory and configured to
3 identify the type of connection set-up being requested and to invoke a
4 corresponding one of a plurality of software images which programs the TDM
5 switch to correctly manage desired connectivity.

1 21. An apparatus for a multi-service network architecture for
2 processing network traffic arriving on a network connection comprising:
3 a plurality of means for processing data for a predetermined network
4 traffic type residing on a single platform; and

5 means for executing code for a predetermined one of a plurality of
6 software images corresponding to the type of network traffic arriving on the
7 network connection and to selectively enable at least one of the plurality of
8 means for processing data according to the predetermined one of a plurality of
9 software images, the means for executing coupled to the plurality of means
10 for processing.

1 22. The apparatus of claim 20 further comprising means for storing
2 the predetermined one of a plurality of software images, the means for
3 storing coupled to the means for executing.

1 23. The apparatus of claim 22 wherein at least one the plurality of
2 means for processing is a Time Division Multiplexed (TDM) switch
3 configured to provide full-duplex serial paths.

1 24. The apparatus of claim 23 wherein the plurality of means for
2 processing comprises a plurality of T1/E1 framers coupled to a first set of
3 plurality of ports on the TDM switch.

1 25. The apparatus of claim 24 further comprising a plurality of
2 digital signal processing modules coupled to a second set of a plurality of ports
3 on the TDM switch.

1 26. The apparatus of claim 25 further comprising a plurality of serial
2 communication controllers coupled to a third set of a plurality of ports on the
3 TDM switch.

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- 1 27. The apparatus of claim 26 further comprising means for
- 2 identifying the type of connection set-up being requested at the network
- 3 connection and to invoke a corresponding one of a plurality of software
- 4 images which programs the TDM switch to correctly manage desired
- 5 connectivity, the means for identifying coupled to the means for storing.

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